

**Commonwealth of Kentucky**  
**Division for Air Quality**  
***PERMIT STATEMENT OF BASIS***

TITLE V (DRAFT PERMIT) NO. V-04-019

KIMBERLY CLARK CORPORATION,

OWENSBORO OPERATIONS, KY.

APRIL 11, 2005

REVIEWER, MASSOUD KAYVANJAH

PLANT I.D.# 021-059-00169, AI# 917, WORK ACTIVITY# APE20040002

APPLICATION LOG # 52848

**SOURCE DESCRIPTION:**

This facility is a non-integrated tissue paper manufacturing mill and uses on-site deinked secondary paper fibers. The mill is not a pulp mill and does not use chlorine compounds to bleach the secondary fibers, which excludes the facility from applicability of 40 CFR 63.440 and 63.445. The facility is a major source of criteria air pollutant (CO and NO<sub>x</sub>), and is currently a minor source of hazardous air pollutant (Acrylamide). The title V application for this source was submitted in October 15th, 1999.

**PROCESS DESCRIPTION**

One unit boiler with 99.3 mmBTU/hr energy rate uses only natural gas as fuel to generate 265 psig steam power for this facility's manufacturing processes. High density recycle/secondary paper fibers from two pulper units are washed and whitened with Hydrogen Peroxide, Sodium Hydroxide, Borol Hydride, and Sodium Bisulfite solutions for use by two Tissue Machines (#1 and #2).

Tissue Machine #1 (TM1) uses two natural gas only air heaters, each with 20 mmBTU/hr rate for drying 8.54 oven dry tons/hr throughput tissue paper as a direct heating process. The exhaust after the tissue dryer (Yankee Drum) containing steam and VOC emissions (collectively from the natural gas burning heaters and the drying tissue) is partially reheated indirectly by the heaters to recycle it back into the Yankee dryer, and excess steam with emissions of the heaters and of the paper are emitted. The TM1 drying process has no emission control device. Dried tissue is continuously scraped off from the dryer's Drum and is rolled on a reel in a batch. A Venturi Scrubber controls PM emissions from the Dry End Paper Reel to preclude a PSD review.

Tissue Machine #2 (TM2) uses two air heaters of 47 mmBTU/hr and 70 mmBtu/hr rates burning natural gas only for drying 17.79 oven dry tons/hr throughput tissue towel paper as a direct heating process. The exhaust after the tissue dryers containing steam and VOC emissions (collectively from the natural gas burning heaters and the drying tissue) is partially reheated indirectly by the heaters to recycle it back into the dryers, and excess steam with emissions of the heaters and of the paper are emitted. The TM2 drying process has no emission control device. Dried paper is continuously blown off the drum and is rolled on a reel in a batch. A Reel Vacuum collects particulate emissions at Dry End Pulper stock .

Nine Converting Lines are used for tissue/towel packaging. The PM emissions are simultaneously controlled with a Torit Baghouse Filter of 98.7% efficiency to preclude a PSD review.

A 0.24 MM gallons/hr capacity Wastewater Treatment Plant treats waste water which is recycled for the paper process.

The other process in the area is a Lime Silo. It has a 98% control efficiency baghouse that controls PM emissions from 45,000 lb lime deliveries (each delivery takes 2 hours). The lime is used for wastewater treatment.

The wastewater treatment plant processes 0.24 Million gallons/hr used water to produce clean water. This process emits 53 tons/year VOC and 0.011 tons/year Acrylamide.

#### **Back Ground of Permit:**

<b>Permit type</b>	<b>Log #</b>	<b>Complete Date</b>	<b>Issuance Date</b>	<b>Summary of Action</b>
<b>Initial Issuance Construction</b>	<b>B323</b>	<b>Sept. 10/91</b>	<b>Jan. 24/92</b>	<b>Permit #C-91-153 issued to Scott Paper Company</b>
<b>Revision-1</b>		<b>Sept. 10/91</b>	<b>Jan. 14/93</b>	<b>General Condition #2 changed</b>
<b>Revision-2</b>		<b>Sept. 10/91</b>	<b>June 9/93</b>	<b>Conversion lines are reduced from 18 to 7</b>
<b>Revision 3</b>	<b>C824</b>	<b>Nov. 29/93</b>	<b>Aug. 3/93</b>	<b>Equipment modifications and throughput changes</b>
<b>Revision 4</b>	<b>R8339</b>	<b>June 13/95</b>	<b>Sept. 29/95</b>	<b>Boiler #2 as backup and change of emissions levels</b>
<b>Revision 5</b>	<b>I0926</b>	<b>June 13/95</b>	<b>Feb. 16/96</b>	<b>Change of heat exchangers allowable emissions</b>
<b>Revision 6</b>		<b>June 13/95</b>	<b>July 30/96</b>	<b>Name change of the company to Kimberly- Clark Tissue Company</b>
<b>Revision 7</b>	<b>R8789</b>	<b>June 13/95</b>	<b>July 30/96</b>	<b>Correction for company name</b>
<b>Revision 8</b>	<b>F278</b>	<b>June 13/9</b>	<b>Oct. 31/97</b>	<b>Backup boiler #2 and Soda Ash silo are removed</b>

#### Emission Factors and Their Source

Criteria pollutants/HAPs emissions calculations for boiler and process heaters are based on AP-42, material balance, and engineering estimates.

#### EMISSIONS SUMMARY:

<b>Pollutant</b>	<b>Actual (tpy)</b>	<b>Potential (tpy)</b>	<b>Uncontrolled Potential</b>
PM	12.76	25.6	465
SO <sub>2</sub>	0.71	1	1
NO <sub>x</sub>	85	134	134
CO	70	142	142
VOC (Boiler, Heaters)	35	40	40
VOC (Waste Water Treatment facility)	53	53	53
HAP less than 10 tpy	0.05	0.135 Acrylamide	0.05

### Applicable Regulation

401 KAR 59.010, New Process Operations applies to the emission sources constructed on or after July 2, 1975 for opacity and mass emissions standard.

401 KAR 59.015, New Indirect heat exchangers applies to the PM, NO<sub>x</sub>, and SO<sub>2</sub> emissions for combustion of fuel.

401 KAR 60.005 [40 CFR 60.48c(g)] Standard of performance for small steam generators rated between 10-100 MMBtu/hr commenced after June 9, 1989.

### Regulations Not Applicable

40 CFR 60 Subpart (D) is not applicable to Emission Unit #27 (SN-36) because it is below the 250 mmBtu/hr heat rate.

40 CFR 63, Subpart S, (the pulp and paper MACT) is not applicable since this facility is not a major source of single HAP, or combined HAPs emissions.

### **CREDIBLE EVIDENCE:**

This permit contains provisions which require that specific test methods, monitoring, and recordkeeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec. 51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements. At the issuance of this permit, Kentucky has not incorporated these provisions in its air quality regulations.